DETAILED ACTION

Status of Claims

1. Claims 1-6, 8-13, 15, 18-19 and 25-33 are pending in this application.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-6, 8-13, 25-29 and 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aoki et al (US 2005/0055710) in view of Tow et al (US 7,266,771), Fukuoka (US 2004/0034868) and Subramoney et al (US 2005/0198088).

Regarding Claims 1 and 8, Aoki discloses a system (FIG.1) with corresponding method for content recording of a personal video recorder comprising:

means for receiving a broadcast program (101);

means for storing said broadcast program on a hard disk (102);

means for receiving a user preference signal via a user interface (104), said user preference signal comprising a skipped signal indicating a scene segment of said broadcast program was skipped by a user during playback (Para 190 - Para 192; viewing history including a skipped signal indicating portion of contents which has been skipped over in preceding time);

means for generating an associated database table in accordance with said user preference signal (FIG.8, element 1107), said associated database table containing a plurality of scene segment records (FIG.10, elements 1304-1, 1304-2, 1304-3);

means for employing a record of said associated database table (FIG.10) that contains a start address field, an end address field (1304-1, each segment inherently includes start and end

addresses), a user preference field generated from said user preference signal (Para 190; Para 213; a user preference field is proportional shaded area through the whole program, like viewed, not viewed or partially viewed) and a show name field (1301, NEWS).

Aoki discloses means for storing skipped segments and viewed segments in the storage area but is silent about means for providing to said user a capacity to delete skipped scene segments skipped by said user during playback using said user interface and recorded in said database table as being skipped; means for receiving a command from said user to delete skipped scene segments for a broadcast program according to said scene segment records in said database;

means for deleting said plurality of scene segment records which contain information of a corresponding plurality of skipped scene segments stored on said hard disk in response to receiving said command from said user to delete skipped scenes, wherein said scene segment records are deleted without deleting said corresponding plurality of skipped scene segments from said hard disk; and means for, subsequent to said deleting, regaining an available space on said hard disk storing said plurality of skipped scene segments for future recording by deleting said plurality of skipped scene segments.

In an analogous art, Tow discloses unwanted scenes or segments can be skipped or deleted from a R-rated movie to create a PG-rated movie for children (Col 4 lines 52-58) which suggests a skipped scene is unwanted by the user and is able to be deleted; Fukuoka further discloses means for providing a deletion scenes capacity to said user to delete unwanted contents to regain an available space in the storage area (Para 29 line 6 to last – last line; Para 62).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Aoki's system to include a deletion of unwanted segments, such as skipped scenes capacity to said user, as taught by Tow and Fukuoka to provide the users with options to maintain storage space based on user's preference.

Furthermore, a person of ordinary skill in the art would have had good reason to pursue the known options of giving the user control over selecting and deleting certain unwanted contents when selecting and deleting portions of stored contents. It would require no more than "ordinary skill and common sense" to give the user (rather than the computer program) control over digitally pointing to selected portions of a stored content and deleting only those designated portions.

Subramoney further discloses a compaction technique may help solve the storage space fragmentation problem. In an ideal situation, most of live objects are moved in the live object compacting phase until all of the live objects are contiguous so that the rest of storage space is a single contiguous free space (Background; specifically in Para 6).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combined systems of Aoki, Tow and Fukuoka to include a compaction technique, as taught by Subramoney to take advantage of the popular technique to free up more disk space; thus making more efficient use of the disk space.

Regarding Claims 2 and 9, Aoki further discloses said user preference signal comprises a viewed signal, a skipped signal and an unviewed signal (Para 189).

Regarding Claims 3 and 10, Aoki further discloses determining a starting point and an ending point of said scene segments on said hard disk based on said user preference signal; and

providing information of said starting point and said ending point of said plurality of scene segments for said associated database table wherein said plurality of scene segments are virtually divided on said hard disk (FIG.8, element 1102; FIG.10, elements 1304-1, 1304-2; each segment inherently includes a start and end address and virtually divided on said hard disk 1102).

Regarding Claims 4 and 11, Aoki further discloses providing a playback which allows said user to play a stored broadcast program;

consulting said user preference field in said associated database table during said payback of said stored broadcast program; and

regenerating said associated database table during said playback of said stored broadcast program when said user wants to edit said broadcast program (Para 62).

Regarding Claims 5 and 12, Aoki further discloses said stored broadcast program is stored on said hard disk (Para 71).

Regarding Claims 6 and 13, Aoki further discloses providing a rewinding capacity of said broadcast program to said user;

determining a starting point of a rewind scene segment in which said user wants to start replaying; providing information of said starting point of said rewind scene segments for said database table; and updating said associated database table in accordance with said user preference (FIG.10, elements 1304-2; Para 242).

Regarding Claims 25 and 31, Aoki discloses a method for content recording of a personal video recorder comprising:

receiving a broadcast program (FIG.1, 101); storing said broadcast program on a hard disk (102); receiving a user preference signal via a user interface (104), said user preference signal comprising a skipped signal indicating a scene segment of said broadcast program was skipped by a user during playback (Para 190 - Para 192; viewing history including a skipped signal indicating portion of contents which has been skipped over in preceding time);

generating an associated database table based upon said user preference signal received from said user interface (FIG.8, 1107), said associated database table containing a plurality of scene segment records corresponding to a plurality of scene segments of said broadcast program (FIG.10, elements 1304-1, 1304-2, 1304-3), said scene segments being defined in response to user preference signals received via said user interface (Col 4 lines 55-58;

skipped segments is defined by a parent through a rating system), said scene segment records of said associated database table (FIG.10) containing a start address field, an end address field (1304-1, each segment inherently includes start and end addresses), a user preference field (Para 190; Para 213; a user preference field is proportional shaded area through the whole program, like viewed, not viewed or partially viewed), and a show name field (1301, NEWS);

upon receiving a skipped signal, generating a skipped record that is one of said plurality of scene segment records, the skipped record containing a start address and an end address of the scene segment that was skipped by the user during playback, the scene segment being one of said plurality of scene segments of said broadcast program (FIG.10; Para 190 – Para 192; skipped record inherently including a start address and an end address of the scene segment that is stored in the memory);

Aoki discloses means for storing skipped segments and viewed segments in the storage area but is silent about providing a deletion skipped scenes capacity to said user; receiving a command from said user to delete skipped scene segments for a broadcast program according to said scene segment records in said database; deleting said plurality of scene segment records which contain information of a plurality of skipped scene segments stored on said hard disk upon reception of a user command; and regaining an available space on said hard disk storing said plurality of skipped scene segments for future recording.

In an analogous art, Tow discloses unwanted scenes or segments can be skipped or deleted from a R-rated movie to create a PG-rated movie for children (Col 4 lines 52-58) which suggests a skipped scene is unwanted by the user and is able to be deleted; Fukuoka further discloses means for providing a deletion scenes capacity to said user to delete unwanted contents to regain an available space in the storage area (Para 29 line 6 to last – last line).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Aoki's system to include a deletion unwanted segments, such as skipped scenes capacity to said user, as taught by Tow and Fukuoka to provide the users with options to maintain storage space based on user's preference.

Similar grounds of rejections as for Claims 1 and 8 are applied for the added amendments.

Regarding Claims 26 and 29, commercial skipping features used in a TiVo box during playback is well known in the art.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include commercial skipping features during playback as a convenient way to avoid the unwanted material.

Regarding Claims 27 and 32, fast forward for skipping features used in a TiVo box during playback is well known in the art.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include fast forward features during playback as a standard way to avoid the unwanted material.

Regarding Claims 28 and 33, pause features used in a TiVo box so users can resume the viewing where left over later is well known in the art.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include pause features to take advantage of popular TiVo feature to resume the viewing later.

3. Claims 15, 18 and 19 are rejected are rejected under 35 U.S.C. 103(a) as being unpatentable over Aoki et al (US 2005/0055710).

Regarding Claim 15, Aoki discloses a method for content recording of a personal video recorder comprising:

receiving a broadcast program (101);

storing said broadcast program on a hard disk (102);

receiving a user preference signal via a user interface (104);

generating an associated database table in accordance with said user preference signal (FIG.8, element 1107), said associated database table containing a plurality of scene segment records (FIG.10, elements 1304-1, 1304-2, 1304-3);

employing a record of said associated database table (FIG.10) that contains a start address field, an end address field (1304-1, each segment inherently includes start and end addresses), a user preference field (viewed, partially viewed or not viewed indicated by shaded area), and a show name field (1301, NEWS);

providing a stop capacity of said broadcast to said user (Para 249);

providing information of a starting point of a unviewed scene segments for said database table (FIG.10, segment between 1304-2 and 1304-4 has been stopped; Para 250);

wherein said unviewed scene segment is virtually divided on said hard disk (unviewed segment is virtually divided on said hard disk), and updating said associated database table in accordance with said user preference (FIG.10, segment between 1304-2 and 1304-4 indicates updating of being stopped);

inherently determining a user preference by said user preference signal supplied through a user interface device wherein said user preference signal comprises a viewed signal, a skipped signal and an unviewed signal (as shown in FIG.10; Para 210-214);

providing a playback which allows said user to play a stored broadcast program; consulting said user preference field in said associated database table during said playback of said stored broadcast program (Para 242); and

Aoki discloses the system is able to update the viewing record during playback of said stored broadcast program but is not explicit about regenerating said database table during said playback of said stored broadcast program when said user wants to edit said broadcast program.

Official Notice is taken that providing a user with options to edit viewing information regarding a broadcast program is well known in the art. Therefore, it would have been obvious to

one of ordinary skill in the art at the time the invention was made to include a options for the user to edit a broadcast program to meet his/her own viewing preferences as a tracking record for future reference.

Regarding Claim 18, as have been analyzed and described as in Claims 5, 12.

Regarding Claim 19, as have been analyzed and described as in Claims 6, 13.

4. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aoki et al (US 2005/0055710) in view of Tow et al (US 7,266,771), Fukuoka (US 2004/0034868) and Subramoney et al (US 2005/0198088) and further in view of Gupta et al (US 7,293,280).

Regarding Claim 30, Aoki discloses a skipped record (FIG.10; Para 190). Gupta further discloses a skipped record down to designate a scene or a frame (FIG.4; Col 2 lines 30-36; Col 9 line 62- Col 10 line 16).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a skipped record down to designate a scene or a frame to provide detailed information for the users.

Response to Arguments

5. Applicant's arguments with respect to claims 1-6, 8-13, 15, 18-19 and 25-33 have been considered but are moot in view of the new ground(s) of rejection.

In reference to Applicant's arguments

(a) Though Fig. 1 may imply the step of "receiving a broadcast program," or the step of "storing said broadcast program on a hard disk," people of ordinary skill in the art may not be able to put the functions of the units into logical order and would not be able to understand the interaction thereof.

Examiner's response

The Examiner respectfully disagrees with Applicant's arguments. People of ordinary skill in the art should be able to put the functions of the units into logical order for the step of receiving a broadcast program and then the step of storing said broadcast program on a hard disk (recited from page 11 for rejection of Claim 15).

In reference to Applicant's arguments

(b) Admittedly, Akoi discloses that the viewing history storage unit uses a method to manipulate the apparatus thereof. However, the method in Akoi (hereinafter "Akoi method") does not disclose the steps of "receiving a user preference signal via a user interface, said user preference signal comprising a skipped signal indicating a scene segment of said broadcast program was skipped by a user during playback" and "generating an associated database table based upon said user preference signal received..." Please refer to paragraph [0260] to [0266] and Fig. 11 in Akoi. Though Akoi teaches establishing a history database by setting the viewing history data, such as "has been viewed", "scan viewing", or "viewing with interest," the way Akoi establishing the history database is evaluating whether the ratio of total time range of viewed portions against that of entire duration is larger, smaller than a predetermined threshold value. Besides, Akoi even defines the situation that the ratio of total time range of viewed portions against that of entire duration is equal to a predetermined threshold value. Hence, the comparison between the signal and the predetermined threshold is different from the steps disclosed in claim 15 (page 12, 2nd paragraph).

Examiner's response

The Examiner also disagrees with Applicant's arguments. Akoi discloses the list information as shown in FIG.10 is related to a past viewing history and specifying information (Para 211) which suggests a step of "receiving a user preference signal via a user interface has been performed" (Para 212; as a manipulation unit 1305 and signal is required to record the viewing history). Furthermore, the viewing history based on the shaded bar as shown in 1304-01—1304-4 of FIG.10 including a blank area on the bar as indication of not being viewed by the

user implies a skipped signal was issued by the user and a scene segment of said broadcast program was skipped by a user. The list information of the past viewing history for the user as shown in FIG.10 suggests generating an associated database table based upon said user preference signal received.

Conclusion

6. Claims 1-6, 8-13, 15, 18-19 and 25-33 are rejected.

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Correspondence Information

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to FRED PENG whose telephone number is (571)270-1147. The examiner can normally be reached on Monday-Friday 09:30-19:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Hirl can be reached on (571) 272-3685. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Fhp

/Joseph P. Hirl/

Supervisory Patent Examiner, Art Unit 2426

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